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# Utilizing Leafy Spurge as Haylage for Sheep

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### Summary

A 30-day feeding trial was conducted with lambs to determine how well sheep would consume leafy spurge haylage and its effect on average daily gain. Lambs consumed the spurge haylage equally as well as oat/rape haylage with similar average daily gains. Results of this trial indicate the potential of utilizing leafy spurge haylage as feed for sheep, thus offering an alternative avenue of control for this noxious weed.

Key Words: Leafy Spurge, Sheep, Haylage

### Introduction

It is well recognized that sheep will graze the noxious weed leafy spurge and at least one sheep producer (Don Genre near Towner, ND) feeds large quantities of leafy spurge hay to sheep. We conducted a small trial to determine how well sheep would consume leafy spurge haylage, and how productive they were while consuming it.

### Experimental Procedure

Leafy spurge was harvested and ensiled at approximately 40% dry matter content from a site in northeastern South Dakota. It was harvested in late June when the leafy spurge was in its late-bloom growth stage. The harvested material was  $54 \pm 18\%$  leafy spurge and  $46 \pm 18\%$  other vegetation. The other vegetation was primarily perennial grasses. The vegetation was chopped to about 3/4 inch particle size before ensiling, and a microbial inoculant was added to the fresh chopped material to ensure proper microbial activity. The vegetation was ensiled in 50-gallon barrels that were lined with heavy plastic bags. The chopped vegetation was packed into the barrels by trampling and the air was evacuated from the material with a

vacuum before the bags were sealed. The nutritional characteristics of the spurge haylage were 35% dry matter, 11.4% crude protein, 54% neutral detergent fiber (NDF), and 41% acid detergent fiber (ADF). Oat/rape haylage was harvested near Brookings and fed to the control animals. It was 38% dry matter, 12% crude protein, 47% NDF and 35% ADF.

Twenty-four crossbred wether lambs (initial wt  $\bar{x}$  = 75 lb) were used for the 30-day trial with half receiving leafy spurge haylage as part of their ration and the other group receiving oat haylage as part of their ration. Each group was penned and fed together from a common feed bunk. Water and salt were available to the lambs at all times. Both groups of lambs were fed 4.4 lb of ground corn, 2.2 lb of soybean meal, and 4.4 lb of alfalfa pellets twice daily. The lambs were gradually adapted to the two haylages by initially feeding them 4.4 lb of haylage twice daily. The amount of haylage fed was gradually increased until the 20th day of the trial. By this day, both groups were fed 20 lb of their respective type of haylage twice daily. This level was maintained until the end of the trial.

### Results and Discussion

Initially, the group offered leafy spurge haylage ate it more readily than the sheep receiving the oat haylage. However, the control group ate the oatlage offered them by the third day of the trial. Except for the coarse stem material, the lambs ate the leafy spurge haylage quite readily. Both groups of lambs gained .36 lb per day during the trial. Leafy spurge haylage appears to be a good source of forage for growing sheep. The amount of coarse stem material could be reduced and level of crude protein increased in the spurge haylage by harvesting it somewhat earlier in its growing season.